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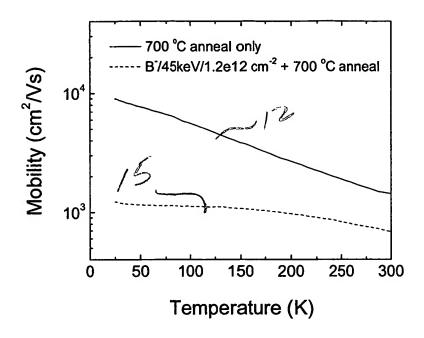


Fig. 1(a)

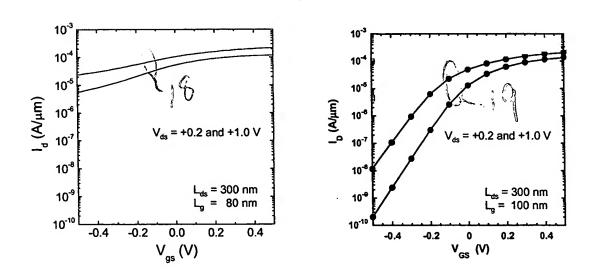


Fig. 1(b)

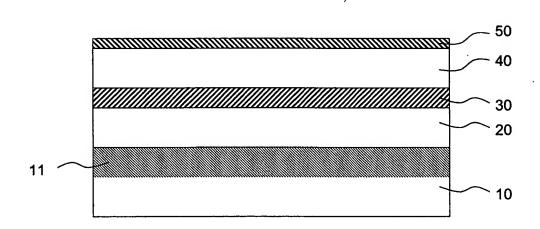


Fig. 2

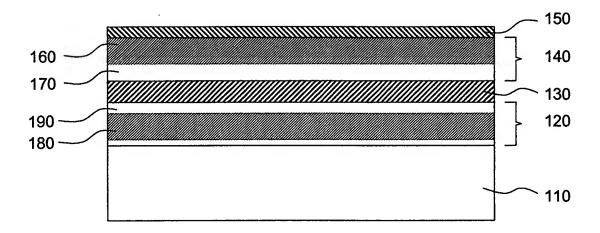


Fig. 3

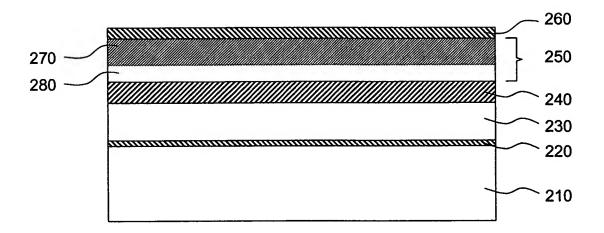


Fig. 4.

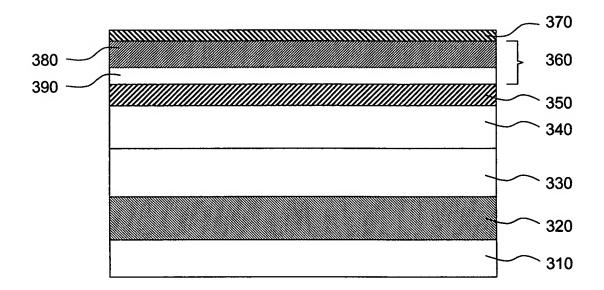


Fig. 5.

*.7

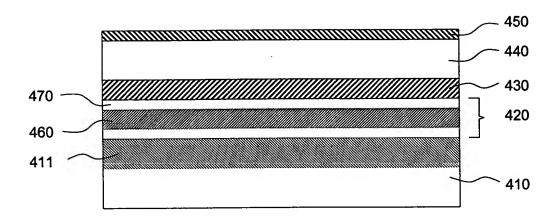


Fig. 6

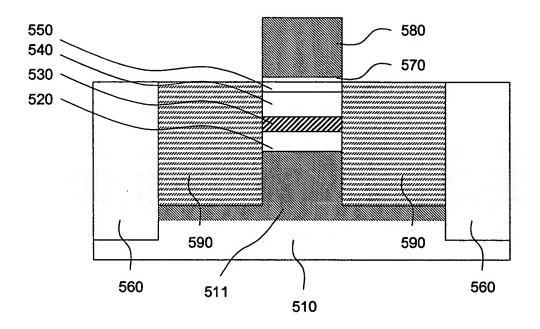


Fig. 7

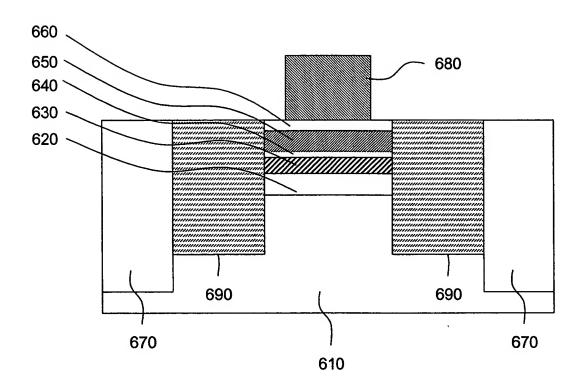
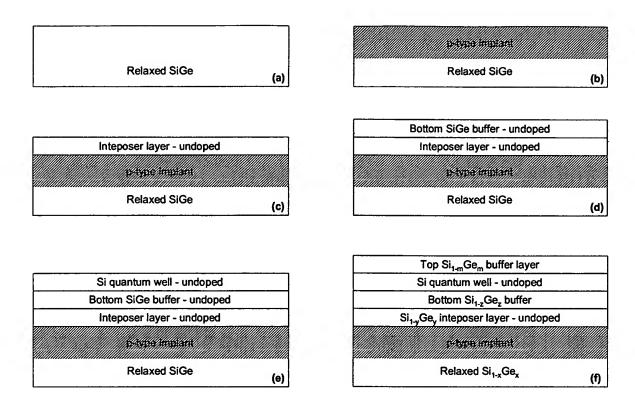


Fig. 8

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Si cap layer	
Top Si _{1-m} Ge _m buffer layer	
Si quantum well - undoped	
Bottom Si _{1-z} Ge _z buffer	
Si _{1-y} Ge _y inteposer layer - undoped	
p4typt/#nplant	
Relaxed Si _{1-x} Ge _x	(g)

Fig. 9.

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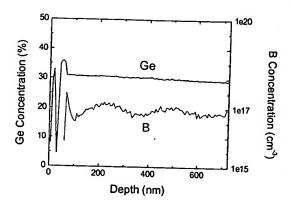


Fig. 10(a). SIMS plot a multi-layer structure with implanted p-well doping, and regrown Si/SiGe modulation-doped quantum well layer structure.

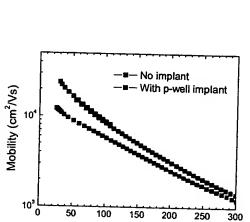


Fig. 10(c). Mobility vs. temperature data for Si/SiGe modulation-doped quantum well layer structures with and without p-well doping. The p-well doping has minimal impact on the room-temperature mobility.

Temperature (K)

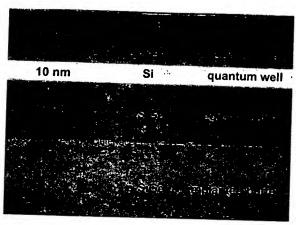


Fig. 10(b). Cross-sectional TEM of a multi-layer structure with implanted p-well doping, and regrown Si/SiGe modulation-doped quantum well layer structure.